

SEQUENCE LISTING



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<110> National Research Council of Canada

<120> PROTEIN CONTAINING A BURP DOMAIN

<130> PAT 753W-2

<140> US 10/522,894

<141> 2003-08-01

<150> US 60/400,836

<151> 2002-08-02

<160> 43

<170> PatentIn version 3.1

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ttcatcgat	tttgogaatg	ctttctgggg	acagccactc	actttgagtt	gttccgatac	1680
ttcttcgggg	tctgcgttca	gaccaacggg	gacaccgtct	gcaaccttgg	aggagccatt	1740
cctgcgacac	accaaattt	tcgccacgga	ccccccgaag	atccgcaaga	aaaaaaaaagc	1800
tgcaacggcg	tggacggcga	gcaccgcacc	gcacacgaac	gcgaacgcga	cgctgccgcg	1860
ccacacaaca	cgccattcgc	gcgcggatcg	tcggatgtca	cgcccacgat	aatattctcc	1920
gggtgccgcac	gtaccatgcg	atcgcacagc	tcacatcgag	agcttttctg	tttggtgtcg	1980
ccgtcaatga	aacaccttcc	cgtcaagccg	acgacgccta	taagtacctc	gcctgatcgc	2040
attatcactc	ccaagtacta	caacctctcg	acctctcacc	tagcgacat	ccatg	2095

<210> 35
 <211> 246
 <212> DNA
 <213> Triticum aestivum

<400> 35

atggcgcgct	tcctcgctgc	cctcctcgct	gccaccctgg	tcgcgggttca	ggctggaggg	60
------------	------------	------------	------------	-------------	------------	----

cagctggggc	acgcagcgcc	ggcgacggcg	gaggtgttct	ggcgcgccgt	gctgccgcac	120
tcgccattgc	ccgacgccgt	tctccgctc	ctcaaacaac	ctgcagcagg	tggtgaactg	180
cacacagaag	ccaccagctt	cgtaagagac	cccaggagaca	ggccccctt	cgactaccgt	240
gattac						246

<210> 36
 <211> 441
 <212> DNA
 <213> Triticum aestivum

<400> 36

atggcgcgct	tcctcgtcgc	cctcctcgct	gccaccctgg	tcgcggtaat	ggccgaagaa	60
gccactgagc	aacgcctgca	tcttctttat	tttggaacac	tggtgctaac	ggccaatact	120
gccgcttgcg	ttacgtctca	ggttcaggct	ggagggcagc	tgggccacgc	agcgccggcg	180
acggcgagg	tggtctggcg	cgccgtgctg	ccgcactcgc	cattgcccga	cgccgttctc	240
cgctcctca	aacaacctgc	agcaggctctg	tcttgcatgt	tcctcgtcgc	cctccgttaa	300
ctgtcttctt	ctctcgaggt	tgattgatca	ccaaacacaa	aaatgcattg	acgcgtacgc	360
gtagggtgtg	aactgcacac	agaagccacc	agcttcgtaa	gagaccccga	ggacaggccc	420
cccttcgact	accgtgatta	c				441

<210> 37
 <211> 1301
 <212> DNA
 <213> Oryza sativa

<400> 37

gtcgcgctcg	tctccggcga	gaaatcggct	gcgccccgtc	tctctctctc	tcgaacgctt	60
ccatggcgcg	cttctctctc	ctcctcgctg	ccgtcgccgc	tgccgcgcgc	gtgctttcgc	120
tgggcgacgc	ggcgccgctg	acggccgagg	tggtctggcg	cgccgtgctg	ccggaatccc	180
cggtgcccga	cgcttctctc	cgctcctccc	gccctgacac	cagcttctgc	gtcggcaaac	240
cggaggcggc	cggtggcgcg	gcgcggaccg	gattccccct	cgattacact	gactacaggg	300
gatctgattc	tcgcacgacg	gcgagtggtt	tggaacctgc	cggtgacttc	ggcgagcccg	360
cgcttttcgg	ctacgactac	agtgcacagg	gcgaaggcgg	cgccggcgcc	ggcgccgccc	420
ccgcggggaga	gcaggttctt	gccgtcgacg	cggtcttcaa	ctacgacaaa	tacgtcggcg	480
cgaggaagct	ccgcggcgcc	agcagcaccg	ccggcgagga	gaatgatgac	gagcctttcg	540
ggtacgacta	caaggcgccg	agcagcggca	gcggcaccgc	ggcgtcgacg	acggcgcgag	600
gcgtcgccac	gggcggccacg	acgacggtgt	tcttccacga	ggaggcggtg	cgcgtcggcg	660
agaggctccc	gttctacttc	ccggcggcga	cgacgtcggc	gctgggcttc	ctgccgcgcc	720
gcgtcgcgga	ctccatcccc	ttcacggcgg	ccgcgtgcc	ggcgctctct	gcgtgtttcg	780
gcgtcgcgcc	ggacaccgcc	gaggcgcccg	gcatgaggga	gacgtcgcg	acgtgcgagt	840
ggccgaccct	cgccggcgag	tccaagttct	gcgccacgtc	gctggaggcc	ctggtggagg	900
gcgccatggc	ggcgctcggg	acacgcgaca	tcgcccgct	ggcgtcgacg	ctgccccgcg	960
gcggcgcgcc	gctgcaggcg	tacgccgtcc	gcgccgtgct	ccccgtcgag	ggcgccggct	1020
tcgtggcggtg	ccacgaccag	gcgtacccgt	acaccgtgta	ccgctgccac	accaccggcc	1080
cggccagagc	ttacatgggtg	gagatggaag	gcgacggcgg	cgccgatggc	ggcgaggcgg	1140
tgaccgtggc	caccgtgtgc	cacaccaaca	cgtcgcgggtg	gaaccgggag	cacgtctcgt	1200
tcaagctcct	cggcaccaag	cccggcggtc	cgccgggtgtg	ccacctcatg	ccgtacgggc	1260
acatcgtctg	ggccaagaac	gtgaagagct	cgacggcgta	g		1301

<210> 38

<211> 1479
 <212> DNA
 <213> Oryza sativa

<400> 38

gtcgcagtcg	tctccggcga	gaaatcggct	gcgccccgtc	tctctctctc	tccaacgctt	60
ccatggcgcg	cttctctctc	ctcctcgtcg	ccgtcgccgc	tgcgcgcgcc	gtgctttcgg	120
tacactcatg	atgcgcgtac	tcagctgagc	catgcaccgt	tgcacccgta	tactaacgat	180
cgctcgatcg	accgacgatg	tgtgttcttc	agcagctggg	cgacgcggcg	ccgtcgacgg	240
ccgaggtgtt	ctggcgcgcc	gtgctgccc	aatccccgtt	gccggacgcc	ttctccgcc	300
tctccgccc	tggtcggtgt	ccttctcttc	tccttcgcc	gccgcgcgcc	gccattactc	360
tcctcgaggt	ttgatttgtt	tgtggacgtt	gcagacacca	gcttcgtcgt	cggcaaagcg	420
gaggcgccg	gtggcgcgcc	gcggaccgga	ttcccccttc	attacactga	ctacagggga	480
tctgattctc	cgacgacggc	gagtggtttg	gacctcgccg	gtgacttcgg	cgagccggcg	540
cctttcggct	acgactacag	tgcacagggc	gaaggcggcg	gcggcgccgc	cgccgcggcc	600
gcgggagagc	aggttcttgc	cgtcgacgcg	ggcttcaact	acgacaaata	cgtcggcgcg	660
aggaagctcc	gcggcgccag	cagcaccgcc	ggcggagaga	atgatgacga	gcctttcggg	720
tacgactaca	aggcgccgag	cagcggcagc	ggcaccgcgg	cgtcgacgac	ggcgcgaggc	780
gtcggcacgg	gcgccacgac	gacggtgttc	ttccacgagg	aggcgggtgc	cgtcggcgag	840
aggctcccgt	tctacttccc	ggcggcgacg	acgtcggcgc	tgggcttctt	gccgcgccgc	900
gtcgcggact	ccatcccgtt	cacggcgccc	gcgtgcggcg	ccgtctctgc	gctgttcggc	960
gtcgcgcggg	acaccgcgga	ggcggccggc	atgagggaga	cgctgcgcac	gtgcgagtgg	1020
ccgaccctcg	ccggcgagtc	caagtctctg	gccacgtcgc	tggaggccct	ggtagggggc	1080
gccattggcg	cgctcgggac	acgcgacatc	gccgcgctgg	cgtcgacgct	gccccgcggc	1140
ggcgcgccgc	tgcaggcgta	cgccgtccgc	gccgtgtctc	ccgtcgaggg	cgccggcttc	1200
gtggcggtgc	acgaccaggc	gtacccgtac	accgtgtacc	gctgccacac	caccggcccc	1260
gccagagctt	acatggtgga	gatggaaggc	gacggcgggc	gcgatggcgg	cgaggcggtg	1320
accgtggcca	ccgtgtgcca	caccaacacg	tcgcggtgga	acccggagca	cgtctcgttc	1380
aagctctctg	gcaccaagcc	cggcggtctg	ccggtgtgcc	acctcatgcc	gtacggggcac	1440
atcgtctggg	ccaagaacgt	gaagagctcg	acggcgtag			1479

<210> 39
 <211> 1461
 <212> DNA
 <213> Oryza sativa

<400> 39

cgaaggcaaa	ctctggtaag	gattcccatt	acacgaatca	atttaataag	tctaaaacga	60
acactatgtt	atgagaaaca	cctcacatcc	gtccataacc	gtgggcatga	ctattttaaaa	120
agtttaacta	aactctacaa	aagttgcacg	ctttaccac	acgtcatgaa	cgtttcacat	180
taccgaatac	atgtggatcg	gacatggccg	acaaaggaga	gttcaataca	aggcttttcc	240
ataaccaatc	cataaatatc	ctatgtccca	cgggtgggtg	gaatctctcc	accaaaccatc	300
aagccaggat	caggtctctc	tctacccatg	ccccactcca	tggactccga	cacatcccca	360
ctgcaggaga	ttgccatata	cgccaccata	ccagtgtctc	tcaaccgcta	acatgttgga	420
caccaaattc	tatatactta	tatagttcat	ctccactaag	tgtagttaat	tacatttctc	480
tcttctctca	ttaagccaca	tcacctcaat	tatttttagc	cttttagatga	tagatctatg	540
gtccaaattg	tcttttcttt	cttctctctt	aaaaacatgc	aatctttaat	actttttaggc	600
tcaaaattgt	atcaaattgt	tttagttttg	tacatattat	gcaacttaat	ttttcgccgc	660
aacgcggagg	ggtatttcat	ctagtattat	ttaagagcta	tacacactgc	tataggggaa	720
aaaaaagata	ggtttggccc	cctggctcag	cctgttgac	ggctatatgt	tgaagggaaa	780
aagccagtac	gttttgtagg	ttgttttttt	tttagaattg	ctaaaaagtt	gtggcatgtt	840
ttttaggtaa	aagccttta	atataagtta	cattgttaact	acagtgtaat	tccgctgtaa	900

ctatatattgta	atctctatat	aagtttagata	taaaattaca	tatatattat	tttaataactt	960
atttataagt	tagtatatta	tagttataat	ggaattaatt	ataattatag	tatagttaga	1020
tttgaaagtt	tttcccttaa	gaaatttcgc	aacagtttat	tagatatagt	ccctaaacga	1080
aaatgtcagg	tggatgcatg	attcagtgtg	acgctcgggc	ggatcacggc	tgcgtcacga	1140
aaattccccc	catgcaaccc	gcgtccggcc	gtccttcgtg	ccaacaggca	acagcgcggc	1200
gccggcgaac	gtcacgcccc	agattatatt	ccccctctcg	cgctcgcgcg	cgccgcgacg	1260
tcgtcggagc	caacattatt	tttctgtttc	ctgtcaccgt	cgccggtgat	ctcaagcgag	1320
atttgagggt	tggccacgac	gacgcctgcc	tataaatacc	aggtggtggt	caccgcccgg	1380
cggcgtcgat	cgatccgtcg	cagtcgtctc	cggcgagaaa	tcggctgcgc	cccgtctctc	1440
tctctctcga	acgcttccat	g				1461

<210> 40
 <211> 389
 <212> PRT
 <213> Triticum aestivum

<400> 40

Met	Ala	Arg	Phe	Leu	Val	Ala	Leu	Leu	Ala	Thr	Thr	Leu	Val	Ala	Val
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Gln	Ala	Gly	Gly	Gln	Leu	Gly	His	Ala	Ala	Pro	Ala	Thr	Ala	Glu	Val
			20					25					30		
Phe	Trp	Arg	Ala	Val	Leu	Pro	His	Ser	Pro	Leu	Pro	Asp	Ala	Val	Leu
		35					40					45			
Arg	Leu	Leu	Lys	Gln	Pro	Ala	Ala	Gly	Val	Glu	Leu	Leu	Thr	Glu	Ala
	50					55				60					
Thr	Ser	Phe	Val	Arg	Asp	Ala	Glu	Asp	Arg	Pro	Pro	Phe	Asp	Tyr	Arg
65				70				75						80	
Asp	Tyr	Ser	Arg	Ser	Pro	Pro	Asp	Asp	Glu	Pro	Ser	Lys	Ser	Thr	Gly
			85					90						95	
Ala	Ala	Ser	Gly	Ala	Arg	Asp	Phe	Asp	Tyr	Asp	Asp	Tyr	Ser	Gly	Gly
		100					105					110			
Asp	Lys	Leu	Arg	Gly	Ala	Ala	Ser	Gly	Ala	Arg	Asp	Phe	Asp	Tyr	Asp
	115					120					125				
Asp	Tyr	Ser	Gly	Ala	Asp	Lys	Leu	Arg	Gly	Ala	Thr	Asp	Glu	Tyr	Lys
	130					135					140				
Ala	Pro	Ser	Ser	Ser	Leu	Ala	Gly	Asn	Gly	Ala	Ser	Met	Ala	Arg	Gly
145				150				155						160	
Gly	Lys	Ala	Glu	Thr	Thr	Thr	Val	Phe	Phe	His	Glu	Glu	Ala	Val	Arg
		165						170						175	
Val	Gly	Lys	Arg	Leu	Pro	Phe	Arg	Phe	Pro	Pro	Ala	Thr	Pro	Ala	Ala
	180							185					190		
Leu	Gly	Phe	Leu	Pro	Arg	Gln	Val	Ala	Asp	Ser	Val	Pro	Phe	Thr	Thr
	195					200						205			
Ala	Ala	Leu	Pro	Gly	Val	Leu	Ala	Thr	Phe	Gly	Val	Ala	Ser	Asp	Ser
	210					215					220				
Ala	Thr	Val	Ala	Ser	Met	Glu	Ala	Thr	Leu	Arg	Ala	Cys	Glu	Ser	Pro
225				230					235					240	
Thr	Ile	Ala	Gly	Glu	Ser	Lys	Phe	Cys	Ala	Thr	Ser	Leu	Glu	Ala	Leu
		245						250					255		
Val	Glu	Arg	Ala	Met	Glu	Val	Leu	Gly	Thr	Arg	Asp	Ile	Arg	Pro	Val
	260							265					270		
Thr	Ser	Thr	Leu	Pro	Arg	Ala	Gly	Ala	Pro	Leu	Gln	Thr	Tyr	Thr	Val
	275						280					285			

Arg Ser Val Arg Pro Val Glu Gly Gly Pro Val Phe Val Ala Cys His
 290 295 300
 Asp Glu Ala Tyr Pro Tyr Thr Val Tyr Arg Cys His Thr Thr Gly Pro
 305 310 315 320
 Ser Arg Ala Tyr Met Val Asp Met Glu Gly Ala Arg Gly Gly Asp Ala
 325 330 335
 Val Thr Ile Ala Thr Val Cys His Thr Asp Thr Ser Leu Trp Asn Pro
 340 345 350
 Glu His Val Ser Phe Lys Leu Leu Gly Thr Lys Pro Gly Gly Thr Pro
 355 360 365
 Val Cys His Leu Met Pro Tyr Gly His Ile Ile Trp Ala Lys Asn Val
 370 375 380
 Asn Arg Ser Pro Ala
 385

<210> 41
 <211> 362
 <212> PRT
 <213> Triticum aestivum

<400> 41

Met Ala Arg Phe Leu Val Ala Leu Leu Ala Ala Thr Leu Val Ala Val
 1 5 10 15
 Gln Ala Gly Gly Gln Leu Gly His Ala Ala Pro Ala Thr Gly Glu Val
 20 25 30
 Phe Trp Arg Ala Val Leu Pro His Ser Pro Leu Pro Asp Ala Val Leu
 35 40 45
 Arg Leu Leu Lys Gln Pro Ala Ala Glu Ser Thr Ser Phe Val Arg Asp
 50 55 60
 Pro Glu Asp Arg Pro Pro Phe Asp Tyr Arg Asp Tyr Ser Arg Ser Ser
 65 70 75 80
 Ser Asp Asp Glu Pro Ser Lys Ser Thr Val Ala Ala Ser Gly Ala Gly
 85 90 95
 Gly Phe Asp Tyr Asp Asn Tyr Ser Gly Ala Asp Glu Arg Arg Gly Ala
 100 105 110
 Thr Asp Glu Tyr Lys Ala Pro Ser Ser Leu Ala Gly Ser Gly Ala
 115 120 125
 Tyr Met Ala Arg Gly Gly Lys Ala Glu Thr Thr Thr Val Phe Phe His
 130 135 140
 Glu Glu Ala Val Arg Val Gly Arg Arg Leu Pro Phe His Phe Pro Pro
 145 150 155 160
 Ala Thr Pro Ala Ala Leu Gly Phe Leu Pro Arg Gln Val Ala Asp Ser
 165 170 175
 Val Pro Phe Thr Thr Ala Ala Leu Pro Gly Ile Leu Ala Thr Phe Gly
 180 185 190
 Ile Ala Ser Asp Ser Thr Thr Val Pro Ser Met Glu Ala Thr Leu Arg
 195 200 205
 Ala Cys Glu Ser Pro Thr Ile Ala Gly Glu Ser Lys Phe Cys Ala Thr
 210 215 220
 Ser Leu Glu Ala Leu Val Glu Arg Ala Met Gly Val Leu Gly Thr Arg
 225 230 235 240
 Asp Ile Arg Pro Val Thr Ser Thr Leu Pro Arg Ala Gly Ala Pro Leu
 245 250 255

Gln	Thr	Tyr	Thr	Val	Val	Ala	Val	Gln	Pro	Val	Glu	Gly	Gly	Pro	Val
			260					265					270		
Phe	Val	Ala	Cys	His	Asp	Glu	Ala	Tyr	Pro	Tyr	Thr	Val	Tyr	Arg	Cys
		275					280					285			
His	Thr	Thr	Gly	Pro	Ser	Arg	Ala	Tyr	Thr	Val	Asp	Met	Glu	Gly	Ala
	290					295					300				
Arg	Gly	Ala	Asp	Ala	Val	Thr	Ile	Ala	Ala	Val	Cys	His	Thr	Asp	Thr
305					310					315					320
Ser	Leu	Trp	Asn	Pro	Glu	His	Val	Ser	Phe	Lys	Leu	Leu	Gly	Thr	Lys
			325						330					335	
Pro	Gly	Gly	Thr	Pro	Val	Cys	His	Leu	Met	Pro	Tyr	Gly	His	Ile	Ile
			340					345					350		
Trp	Ala	Lys	Asn	Val	Lys	Arg	Ser	Pro	Ala						
		355					360								

<210> 42
 <211> 82
 <212> PRT
 <213> Triticum aestivum

<400> 42

Met	Ala	Arg	Phe	Leu	Val	Ala	Leu	Leu	Ala	Ala	Thr	Leu	Val	Ala	Val
1				5					10					15	
Gln	Ala	Gly	Gly	Gln	Leu	Gly	His	Ala	Ala	Pro	Ala	Thr	Ala	Glu	Val
			20					25					30		
Phe	Trp	Arg	Ala	Val	Leu	Pro	His	Ser	Pro	Leu	Pro	Asp	Ala	Val	Leu
		35					40					45			
Arg	Leu	Leu	Lys	Gln	Pro	Ala	Ala	Gly	Val	Glu	Leu	His	Thr	Glu	Ala
	50					55					60				
Thr	Ser	Phe	Val	Arg	Asp	Pro	Glu	Asp	Arg	Pro	Pro	Phe	Asp	Tyr	Arg
65					70				75						80
Asp	Tyr														

<210> 43
 <211> 412
 <212> PRT
 <213> Oryza sativa

<400> 43

Met	Ala	Arg	Phe	Leu	Leu	Leu	Leu	Val	Ala	Val	Ala	Ala	Ala	Ala	Ala
1				5					10					15	
Val	Leu	Ser	Leu	Gly	Asp	Ala	Ala	Pro	Ser	Thr	Ala	Glu	Val	Phe	Trp
			20					25					30		
Arg	Ala	Val	Leu	Pro	Glu	Ser	Pro	Leu	Pro	Asp	Ala	Phe	Leu	Arg	Leu
		35					40					45			
Leu	Arg	Pro	Asp	Thr	Ser	Phe	Val	Val	Gly	Lys	Ala	Glu	Ala	Ala	Gly
	50					55					60				
Gly	Ala	Ala	Arg	Thr	Gly	Phe	Pro	Phe	Asp	Tyr	Thr	Asp	Tyr	Arg	Gly
65					70				75						80

17/17